REMARKS

Claim 5 is are amended, no claims are canceled or are added; as a result, claims 1, 4-9, 13-17, and 21-43 remain pending in this application.

Applicant respectfully requests that the next Action not be made final, because dependent claims 32-43 were not addressed in the Action dated February 7, 2006. The Examiner agreed with the applicant's representative that the next action should not be made final in view of this USPTO oversight.

Claim 5 is amended to conform the claim to US practice by changing the spelling of "color" and adopting the claims to usual group claiming style.

§*103 Rejection of the Claims*

Claims 1, 4-9, 13-17 and 21-31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Schellenger (US 2,002,481) in view of Miller et al. (US 2,590,442). Since a *prima facie* case of obviousness has not been established, the Applicant respectfully traverse this rejection.

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d (BNA) 1596, 1598 (Fed. Cir. 1988). In combining prior art references to construct a *prima facie* case, the Examiner must show some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art that would lead an individual to combine the relevant teaching of the references. *Id.* The M.P.E.P. contains explicit direction to the Examiner that agrees with the *In re Fine* court:

> In order for the Examiner to establish a *prima facie* case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant' s disclosure. *M.P.E.P.* § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d (BNA) 1438 (Fed. Cir. 1991)).

The fact that the references can be combined or modified does not render the resultant combination obvious *unless* the prior art *also* suggests the desirability of the combination. *In re Mills*, 16 USPQ2d 1430 (Fed. Cir. 1990); M.P.E.P. § 2143.01. That is, unless all three of the conditions described in M.P.E.P. § 2142 are met, a *prima facie* case of obviousness is not established, and rejection under 35 U.S.C.§103 is improper.

All of the features of claim 1 are not found in Schellenger or Miller, either alone or in combination. Claim 1 recites, in part, "a flow induced pressure generating portion including one or more lengths of coiled tubing for developing a differential pressure in the paint circulation line, the differential pressure being proportional to the magnitude of paint flow therein, each of the pressure generating portions being selected to generate sufficient differential pressure sufficient to provide an operative pressure differential at a corresponding paint output nozzle assembly." For example, claim 1 recites "one or more lengths of coiled tubing for developing a differential pressure in the paint circulation line." This is not found in the applied references. The Office Action at page 3 admits that Schellenger does not disclose coiled tubing. The Office Action relies on Miller for coils. However, Miller does not discuss, teach or even suggest coils for developing a differential pressure in the paint circulation line. As Schellenger and Miller, either alone or in combination, fail to teach or suggest all of the features of claim 1, applicant requests withdrawal of the rejection.

Applicant further asserts that there is not reasonable expectation of success in combining Schellenger with Miller. The present claim 1 recites a flow induced pressure generating portion including one or more lengths of coiled tubing for developing a differential pressure in the paint circulation line. First, Miller does not teach how its heating coil 18 would provide a differential pressure. Neither Schellenger nor Miller teach or even suggest a coil providing a differential pressure as Schellenger and Miller each have valves (e.g., Schellenger 35, 36; Miller 56, 57) to control pressure. Still further Schellenger teaches away from the invention defined in claim 1. Schellenger states that the constant circulation of the liquid through the system under constant pressure, provides a very effective method of supplying a uniform mixture of the liquid to the spray guns (col. 5, lines 46-50, underlining added). Accordingly, there is no reasonable expectation of success in combining Schellenger with Miller. Applicant respectfully request withdrawal of the rejection and allowance of claim 1.

Claim 1 further recites, in part, "wherein each paint circulation line is substantially free of any component of sufficient size to cause accumulation of settled solids from a paint mixture to cause pressure changes to a degree requiring that the system be recalibrated or to cause settled solids to be deposited on a painted surface to a degree requiring remedial repair." One example of such components includes gauge assemblies (specification page 27, lines 5-10), which appear to be shown in both Schellenger (see gauges 33, 34) and Miller (see gauge 50). The Office Action does not provide a statement where these features are found in Schellenger or Miller. As such a *prima facie* case of obviousness has not been established.

Claims 4-5, 13, 21-26 depend on claim 1 and are allowable for at least the reasons as stated above.

Claim 21 recites "the lengths of coiled tubing are arranged in series or in parallel in a corresponding paint circulation line." Applicant can not find these features in Schellenger or Miller. As discussed above, Schellenger does not have coils. Miller only shows a single coil 18, see for example, Figure 1 of Miller. Accordingly, all of the features of claim 21 are not found in Schellenger and Miller, either alone or in combination. Allowance of claim 21 is requested.

Claim 23 recites "the length of coiled tubing has one or more predetermined coil parameters, including inner tube diameter, coil diameter, coil length, and coil pitch, one or more of which being selected according to a predetermined flow induced differential pressure." Applicant can not find these features in Schellenger or Miller. As discussed above, Schellenger does not have coils. Miller does not teach any parameters of its coil 18. Accordingly, all of the features of claim 23 are not found in Schellenger and Miller, either alone or in combination. Allowance of claim 23 is requested.

Claim 24 recites "one or more than one length of coiled tubing has an inner tube diameter ranging from about 1/8 inch to about 1/2 inch, a wall thickness ranging from about 0.020 inch to about 0.065 inch, a coil diameter ranging from about 1/2 inch to about 12 inches and a coil pitch ranging from about 1/8 inch to about 1 inch." Applicant can not find these features in Schellenger or Miller. As discussed above, Schellenger does not have coils. Miller does not teach any parameters of its coil 18. Accordingly, all of the features of claim 24 are not found in Schellenger and Miller, either alone or in combination. Allowance of claim 24 is requested.

Claim 25 recites "each length of coiled tubing is formed from stainless steel materials." Applicant can not find this feature in Schellenger or Miller. As discussed above, Schellenger does not have coils. Miller does not teach this feature. Accordingly, all of the features of claim 25 are not found in Schellenger and Miller, either alone or in combination. Allowance of claim 25 is requested.

Claim 26 recites "the length of coiled tubing has an inner tube diameter of ¼ inch, a length of about 20 inches, a wall thickness of 0.035 inch, a coil diameter of about 4 inches, a coil pitch of ½ inch, and an overall tube length of about 20 inches." Applicant can not find these features in Schellenger or Miller. As discussed above, Schellenger does not have coils. Miller does not teach these features. Accordingly, all of the features of claim 26 are not found in Schellenger and Miller, either alone or in combination. Allowance of claim 26 is requested.

Claim 6 recites, in part, "each of said paint circulation lines further comprising a flow induced pressure generating portion including one or more lengths of coiled tubing for developing a differential pressure in the paint circulation line, the differential pressure being proportional to the magnitude of paint flow therein, each of the pressure generating portions being selected to generate sufficient differential pressure sufficient to provide an operative pressure differential at a corresponding paint output nozzle assembly, wherein the pressure differential of all paint circulation lines is such that the design flow rate in every paint circulation line is substantially obtained in a stable and robust fashion, wherein changes in viscosity, provided the flow stays in the laminar flow zone, will cause the design flow rates in each and every paint circulation line to be substantially maintained." Applicant submits that claim 6 is allowable over Schellenger and Miller for at least substantially similar reasons as stated above with regard to claim 1. Moreover, claim 6 further distinguishes over Schellenger and Miller by reciting "wherein the pressure differential of all paint circulation lines is such that the design flow rate in every paint circulation line is substantially obtained in a stable and robust fashion, wherein changes in viscosity, provided the flow stays in the laminar flow zone, will cause the design flow rates in each and every paint circulation line to be substantially maintained." Applicant can not find these features in the applied references. Accordingly, applicant requests allowance of claim 6 and its dependent claim 27.

Claim 7 recites, in part, "a means for generating differential pressure according to the operative flow rate, the means for generating differential pressure including one or more lengths of coiled tubing wherein each paint drop line is substantially free of any component or dead spot of sufficient size to cause accumulation of settled solids from a paint mixture to cause pressure changes to a degree requiring that the system be recalibrated or to cause settled solids to be deposited on a painted surface to a degree requiring remedial repair thereof." Applicant can not find these features in Schellenger and Miller. Claim 7 includes a means-plus-function element under 35 U.S.C. § 112, paragraph 6.[1] The Examiner has not provided an explanation or a rationale as to why either Schellenger and Miller shows an equivalent to the corresponding elements disclosed in the specification.[2] Applicant request allowance of claim 7 and its dependent claim 28.

Claim 8 recites, in part, "a means for generating differential pressure according to an operative flow rate for the corresponding at least one spray gun assembly, the means for generating differential pressure including one or more lengths of coiled tubing, wherein each paint drop line is substantially free of any component or dead spot of sufficient size to cause accumulation of settled solids from a paint mixture to cause pressure changes to a degree requiring that the system be recalibrated or to cause settled solids to be deposited on a painted surface to a degree requiring remedial repair thereof, wherein each paint drop line is free of pressure regulators, pressure reducing valves, pressure gauge assemblies, tees, standpipes, isolation valves, isolation diaphragms, or a combination thereof." Applicant can not find these features in Schellenger and Miller. Claim 8 includes a means-plus-function element under 35 U.S.C. § 112, paragraph 6. The Examiner has not provided an explanation or a rationale as to why either Schellenger and Miller shows an equivalent to the corresponding elements disclosed in the specification. Applicant further points to the pressure valves 35, 36 and pressure gauges 33, 34 of Schellenger, which are not part of claim 8. Applicant still further points to gauge 50 and pressure relief valve 57 of Miller, which are not part of claim 8. Accordingly, Schellenger

[1] MPEP 2181.

[2] MPEP 2182, 2183.

and Miller each teach away from and do not include all o the features of present claim 8. As such, applicant request allowance of claim 8 and claims 29-31 depending therefrom.

Applicant notes that claims 32-33 also depend from claim 8. These claims were not previously examined. In any event, applicant submits that claims 32-33 should be allowed with their parent claim 8.

Claim 9 recites, in part, "a means for generating differential pressure according to a magnitude of paint flowing therein and under low shear flow conditions, the means for generating differential pressure including one or more lengths of coiled tubing, wherein each paint drop line is substantially free of one or more sources of shear induced damage to additives contained in a paint mixture resulting in inconsistencies in a painted surface to a degree requiring remedial repair thereof." Claim 9 includes a means-plus-function element under 35 U.S.C. § 112, paragraph 6. The Examiner has not provided an explanation or a rationale as to why either Schellenger and Miller shows an equivalent to the corresponding elements disclosed in the specification. Applicant further submits that Schellenger and Miller do not teach the above elements. Reconsideration and allowance of claim 9 are respectfully requested.

Claim 14 recites, in part, "control means located in each drop line for controlling a flow rate of paint through each drop line, the control means including one or more lengths of coiled tubing, wherein the control means is operative to adjust the flow rate according to a flow controlling pressure differential, and wherein the flow controlling pressure differential is the pressure differential across the drop line between the supply channel and the return channel." Applicant can not find such a control means in the applied references. Accordingly, applicant requests reconsideration and allowance of claim 14.

Claim 15 recites, in part, "control means located in each drop line for controlling a flow rate of paint through each drop line, the control means including one or more lengths of coiled tubing, wherein the control means is operative to adjust the flow rate according to a flow controlling pressure differential, and wherein the flow controlling pressure differential is the pressure differential across the drop line between the supply channel and the return channel, wherein changes to viscosity in the paint do not result in changes to the system requiring

recalibration between paint drop lines." Applicant can not find such a control means in the applied references. Accordingly, applicant requests reconsideration and allowance of claim 15.

Claim 16 recites, in part, "means for establishing a flow controlling pressure differential between the supply channel and the return channel in each drop line which is directly proportional to the paint flow rate, the means for establishing a flow controlling pressure differential including one or lengths of coiled tubing in each of the drop lines, wherein a change in the flow controlling pressure differential in a given drop line causes a corresponding proportional change in the paint flow rate through the given drop line." Applicant can not find such a control means in the applied references. Claim 16 includes a means-plus-function element under 35 U.S.C. § 112, paragraph 6. The Examiner has not provided an explanation or a rationale as to why either Schellenger and Miller shows an equivalent to the corresponding elements disclosed in the specification. Accordingly, applicant requests reconsideration and allowance of claim 16.

Claim 17 recites, in part, "means for limiting changes to the drop line flow rate in a given drop line to within a proportional change in a flow controlling pressure differential in the corresponding drop line between the supply channel and the return channel, the means for limiting changes including one or more lengths of coiled tubing located in each drop line." Applicant can not find such a control means in the applied references. Claim 17 includes a means-plus-function element under 35 U.S.C. § 112, paragraph 6. The Examiner has not provided an explanation or a rationale as to why either Schellenger and Miller shows an equivalent to the corresponding elements disclosed in the specification. Accordingly, applicant requests reconsideration and allowance of claim 17.

Duty of Disclosure

In accordance with applicant's duty to disclose information which may be material to patentability, the Examiner is hereby advised that the original U.S. provisional application serial

no. 60/423,236 was filed October 31, 2002 and within the one year anniversary of the first use of the claimed device in the United States. The present claims are believed to be fully supported by the original U.S. provisional application.

Applicants therefore wish to point out that, to the best of their knowledge, an embodiment of the claimed device was in use in the United States as of November 1, 2001.

After reasonable inquiry, Applicants submit that, to the best of their knowledge:

1. The apparatus according to the claimed invention, and vehicles having components made by using the claimed device, were not known or used by others in the United States prior to November 1, 2001; and
2. The apparatus according to the claimed invention, and vehicles having components made by using the claimed device, were not in public use or on sale in the United States prior to November 1, 2001.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney, Daniel J. Kluth, at (612) 373-6904 or the undersigned to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date 8 May '06 (Monday)

By
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 8 day of May, 2006.

CANDIS BUENDING
Name

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